

## ABSTRACT

### ~~OF THE DISCLOSURE~~

5    ~~Two classes of polypeptides derived from human IgE are described. One class binds selectively to the high affinity IgE receptor on mast cells and basophils, but not to the low affinity IgE receptor on B cells, monocytes, eosinophils~~

The present invention describes IgE antagonists (including variant anti-IgE antibodies) and their use in diagnosis, therapy or prophylaxis of allergic and platelets.

10    ~~The other class binds to the low affinity receptor, but not the high affinity receptor. The differential binding polypeptides of this invention are useful in diagnostic procedures for IgE receptors or in the therapy of IgE-mediated disorders, including asthma, food allergies, hypersensitivity and anaphylactic reactions, such as allergies. They also are useful in preparing antibodies capable of binding regions~~  
15    ~~of IgE that participate in receptor binding.~~

20    ~~α-strand A loop AB α-strand B~~

360 ~~X D S N P R G V S A Y L S R P S P F D X L F I R K S P T I T~~  
1,7-8

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~~loop BC α-strand C loop CD~~

390 ~~C L V V D L A P S K G T V N L T W S R X A S X X G K P V N H~~  
2-9-3

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~~α-strand D loop DE α-strand E loop EF~~

420 ~~S T R K E E K Q R X N X X G T L T V T S T L P V G T R D W I~~  
6-10-4

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~~â strand F loop FG â strand G~~

~~450 E G E T Y Q C R V T H P H L P R A L X M R S T T K T S G P~~

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~~FIGURE 1~~

~~MaE11 Light Chain~~

DIVLTQSPASLAVSLGQRATISCKASQSVDDYDCDSYMNWYQQKPGQPPILLIYAASYLG  
SEIPARFSGSGSCTDFTLNHPVEEEDAATFYCQQSHEDPYTFGACTKLEIK

5

~~MaE11 Heavy Chain~~

DVQLQESGPGLVKPSQSLSLACSVTCYSITSGYSWNWIRQFPCNKLEWMGSITYDGSS  
NYNPSLKNRISVTRDTSQNQFFLKLNSATAEDTATYYCARGSHYFCHWHFAVWGACTTVT  
VSSAKTTPPSVYPLAR

10

~~Mae13 Light Chain~~

VDDIVMTQSQKFMSTSVGDRVSVTEKASQNVSSNVAWYQQKPGQSPKALIYSASYRYS  
PDRFTGSGSCTDFTLTISNVQSEDLAEYFCQQYYTYPLYTFGGCTKLEIKRADAAPT  
FPPSTR

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~~Mae13 Heavy Chain~~

VDDVQLQESGPGLVKPSQSLSLTCTVTGYSITSDNAWNWIRQFPCNKLEWMCYINHS  
SYNPSLKRISITRDTSKNQFFLQLNSVTTEDTATYYCAWVAYAMDYWGQCTSVTVSSA  
KTPPSVYPLAR

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~~Mae15 Light Chain~~

DIQLTQSPASLAVSLGQRATISCKASQSVDDYDCDSYMNWYQQKPGQPPKLLIYAASN  
GIPARFSGSGSCTDFTLNHPVEEEDAATYYCQQSNEDPFTFGACT

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~~Mae15 Heavy Chain~~

VDDVQHQESEPDLVKPSQSLSLTCTVTGYSITSCYNRHWIRQFPCNKLEWMCYIHYSG  
NYNPSLKRRIISITRDTSKNQFFLQLNSVTTEDTATYYCARGSIYYYGSRYYFYFDVW  
TVTSSAKRHPHLSIHWPG

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FIGURE 2

5 Humanized MaE11 Version 1 (intact IgG)

Heavy Chain

EVQLVESGGGLVQPGGSLRLSCAIVSGYSITSGYSWNWIRQAPCKGLEWVASITYDGSSTNY  
ADSVKGRFTISRDDSKNTFYLQMNSLRAEDTAVYYCARGSHYFGHWHFVAVWCQGTLLVTVS  
10 SASTKCGKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL  
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPEL  
LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE  
QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS  
REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDK  
15 SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

Light Chain

DIQLTQSPSSLSASVCGDRVITTCRASQSVVDYDGDSYMNWYQQKPKAPKLLIYAASYLES  
20 GVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSHEDPYTFCQGTKVEIKRTVAAPSVF  
IFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSSTYSLS  
STLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

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~~FIGURE 3~~